WHAT IS CLAIMED IS:

1. A method for cutting a plurality of mother rod lenses having a predetermined gradient index with a cutter, the method comprising the steps of:

arranging the mother rod lenses, each having an optical axis, such that the optical axes of the mother rod lenses are parallel to one another;

forming a lens block for holding the mother rod lenses, wherein the lens block has a first side surface and a second side surface, the first and second side surfaces being arranged parallel to the optical axes and at a predetermined angle with respect to each other;

arranging the lens block at a predetermined position;

emitting laser beams respectively toward the first and second side surfaces;

receiving reflection lights of the laser beams reflected by the first and second side surfaces with first and second screens, respectively;

adjusting the perpendicularity of the first side surface relative to a predetermined cutting surface of the cutter such that the reflection light of the first side surface hits a first base position on the first screen;

adjusting the perpendicularity of the second side surface relative to the predetermined cutting surface such that the reflection light of the second side surface hits a second base position on the second screen; and

cutting the lens block and the mother rod lenses with the cutter to produce a plurality of rod lenses having a predetermined length.

2. The method according to claim 1, wherein the lens block is a rectangular parallelepiped, and wherein the

rectangular parallelepiped has two end surfaces perpendicular to the optical axes and four side surfaces parallel to the optical axes, the four side surfaces including the first and second side surfaces.

3. The method according to claim 1, wherein the cutting step includes adjusting the perpendicularity of the first and second side surfaces of the lens block and then inclining one of the first and second side surfaces at a predetermined angle relative to the predetermined cutting surface to cut the lens block and the mother rod lenses.

4. The method according to claim 1, wherein the first and second side surfaces of the lens block are two adjacent side surfaces, and the laser beam emitting step includes emitting the laser beams toward the two adjacent side surfaces from a single laser beam source.

5. The method according to claim 1, wherein the cutting step includes cutting the lens block with a diamond cutter.

6. A method for cutting a plurality of mother rod lenses having a predetermined gradient index with a cutter, the method comprising the steps of:

arranging the mother rod lenses, each having an optical axis, such that the optical axes of the mother rod lenses are parallel to one another;

forming a lens block for holding the mother rod lenses, wherein the lens block has an outer surface parallel to the optical axes, and wherein a first flat surface reflection body and a second flat surface reflection body are arranged on the outer surface separated from each other by a

predetermined distance;

arranging the lens block at a predetermined position;

emitting laser beams respectively toward the first and second flat surface reflection bodies;

receiving reflection lights of the laser beams reflected by the first and second flat surface reflection bodies with first and second screens, respectively;

adjusting the perpendicularity of the first flat surface reflection body relative to a predetermined cutting surface of the cutter such that the reflection light of the first flat surface reflection body hits a first base position on the first screen;

adjusting the perpendicularity of the second flat surface reflection body relative to the predetermined cutting surface such that the reflection light of the second flat surface reflection body hits a second base position on the second screen; and

cutting the lens block and the mother rod lenses with the cutter to produce a plurality of rod lenses having a predetermined length.

7. The method according to claim 6, wherein the cutting step includes adjusting the perpendicularity of the first and second flat surface reflection bodies of the lens block and then inclining one of the two flat surface reflection bodies at a predetermined angle relative to predetermined the cutting surface to cut the lens block and the mother rod lenses.

8. The method according to claim 6, wherein the laser beam emitting step includes emitting the laser beams toward the two flat surface reflection bodies from a single laser beam source.

9. The method according to claim 6, wherein the cutting step includes cutting the lens block with a diamond cutter.

10. A lens block for holding a plurality of mother rod lenses having a predetermined gradient index to cut the mother rod lenses with a cutter, the lens block comprising:

a holding frame for holding the mother rod lenses, each having an optical axis, such that the optical axes of the mother rod lenses are parallel to one another, wherein the holding frame has two side surfaces arranged parallel to the optical axes and at a predetermined angle with respect to each other, the holding frame and the mother rod lenses being integrated with each other by a resin.

11. The lens block according to claim 10, wherein the holding frame is a rectangular parallelepiped, and wherein the rectangular parallelepiped has two end surfaces perpendicular to the optical axes and four side surfaces parallel to the optical axes, the four side surfaces including the first and second side surfaces.

12. A lens block for holding a plurality of mother rod lenses having a predetermined gradient index to cut the mother rod lenses with a cutter, the lens block comprising:

a holding frame for holding the mother rod lenses, each having an optical axis, such that the optical axes of the mother rod lenses are parallel to one another, wherein the holding frame has an outer surface parallel to the optical axes, the holding frame and the mother rod lenses being integrated with each other by a resin.

13. A lens block for holding a plurality of mother rod lenses having a predetermined gradient index to cut the mother rod lenses with a cutter, the lens block comprising:

a plurality of cylindrical dummy glass rods, each having a center axis; and

a holding frame for holding the dummy glass rods such that the center axes of the mother rod lenses are parallel to one another, wherein the holding frame has two side surfaces arranged parallel to the center axes and at a predetermined angle with respect to each other;

wherein the mother rod lenses each have a diameter smaller than the diameter of the dummy glass rods, the mother rod lenses being held between the dummy glass rods and the holding frame such that the optical axes of the mother rod lenses are parallel to one another; and

wherein the holding frame, the dummy glass rods, and the mother rod lenses are integrated with each other by a resin.

14. The lens block according to claim 13, wherein the holding frame is a rectangular parallelepiped, and wherein the rectangular parallelepiped has two end surfaces perpendicular to the optical axes and four side surfaces parallel to the optical axes.

15. A lens block for holding a plurality of mother rod lenses having a predetermined gradient index to cut the mother rod lenses with a cutter, the lens block comprising:

a plurality of cylindrical dummy glass rods, each having a center axis; and

a holding frame for holding the dummy glass rods such that the center axes of the mother rod lenses are parallel to one another, wherein the holding frame has an outer

surface parallel to the center axes,

wherein the mother rod lenses each have a diameter smaller than the diameter of the dummy glass rods, the mother rod lenses being held between the dummy glass rods and the holding frame such that the optical axes of the mother rod lenses are parallel to one another; and

wherein the holding frame, the dummy glass rods, and the mother rod lenses are integrated with each other by a resin.

16. A cutting apparatus for cutting a plurality of mother rod lenses held by a lens block, wherein the lens block has a first side surface and a second side surface arranged at a predetermined angle relative to each other, the apparatus comprising:

a cutting machine for cutting the lens block along a predetermined cutting surface;

a laser beam source for emitting laser beams toward the first and second side surfaces; and

a first screen and a second screen for receiving reflection lights of the laser beams reflected by the first and second side surfaces, respectively;

wherein the first screen has a first base line hit by the reflection light of the laser beam reflected by the first side surface when the first side surface is perpendicular to the predetermined cutting surface; and

wherein the second screen has a second base line hit by the reflection light of the laser beam reflected by the second side surface when the second side surface is perpendicular to the predetermined cutting surface.

17. A cutting apparatus for cutting a plurality of mother rod lenses held by a lens block, wherein the lens

block has an outer surface including a first flat surface reflection body and a second flat surface reflection body separated from each other by a predetermined distance, the apparatus comprising:

a cutting machine for cutting the lens block along a predetermined cutting surface;

a laser beam source for emitting laser beams toward a first side surface and a second side surface; and

a first screen and a second screen for receiving reflection lights of the laser beams reflected by the first and second flat surface reflection bodies, respectively;

wherein the first screen has a first base line hit by the reflection light of the laser beam reflected by the first flat surface reflection body when the first flat surface reflection body is perpendicular to the predetermined cutting surface; and

wherein the second screen has a second base line hit by the reflection light of the laser beam reflected by the second flat surface reflection body when the second flat surface reflection body is perpendicular to the predetermined cutting surface.

18. A method for positioning a lens block holding a plurality of mother rod lenses to cut a plurality of mother rod lenses with a cutter, wherein the lens block includes a holding frame for holding the mother rod lenses, each having an optical axis, such that the optical axes of the mother rod lenses are parallel to one another, the holding frame including a first side surface and a second side surface arranged parallel to the optical axes and at a predetermined angle relative to each other, the method comprising the steps of:

arranging the lens block at a predetermined position;

emitting laser beams respectively toward the first and second side surfaces;

receiving reflection lights of the laser beams reflected by the first and second side surfaces with first and second screens, respectively;

adjusting the perpendicularity of the first side surface relative to a predetermined cutting surface of the cutter such that the reflection light of the first side surface hits a first base position on the first screen; and

adjusting the perpendicularity of the second side surface relative to the predetermined cutting surface such that the reflection light of the second side surface hits a second base position on the second screen.

19. The method according to claim 18, further comprising the method of:

adjusting the perpendicularity of the first and second side surfaces of the lens block and then inclining one of the first and second side surfaces at a predetermined angle relative to the predetermined cutting surface.